

Notice of Allowability

Application No.

10/603,982

Examiner

Lynne A. Gurley

Applicant(s)

NEMOTO ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed 6/26/03.
2. ☒ The allowed claim(s) is/are 1-5.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☒ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. 1203.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>1203</u> |
| 3 <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. _____ | 7 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stephen A. Becker on 12/4/03.

The application has been amended as follows:

Changes to the Claims

In claim 2, line 21, "said" has been changed to "a", after "and", before "thinned";

In claim 5, line 4, "comprises" has been changed to "comprise";

Informal changes to the Abstract

In line 4, "(11)" has been changed to "(7)", after "Recesses", before "are";
"(10)" has been changed to "(6)", after "substrate proper", before "that";

Informal changes to the Specification

On page 5, line 14, --or monocrystalline composed of silicon as its principal component—has been inserted after "silicon", before "and";

On page 7, line 8, "serve" has been changed to "serves", after "which", before "to form".

Changes To The Title

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Therefore, the title has been changed to "METHOD OF MANUFACTURING A SEMICONDUCTOR DEVICE WITH RECESSES USING ANODIC OXIDE".

Changes To The Drawings

2. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: See the PTO Form 948. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Reasons For Allowance

3. The following is an examiner's statement of reasons for allowance: The closest prior art of record, Gurtler et al. (US 5,424,245) and Takahashi et al. (JP 2001-53218, see specification, page 2) fail to teach or suggest, either alone or in combination, the combination of steps of the claimed invention, particularly including:

“an anodic oxide film forming step of anodizing the rear surface of said substrate proper to form an anodic oxide film; and a semiconductor substrate forming step of forming said semiconductor substrate by removing said anodic oxide film by means of etching”

and

“an anodic oxide film forming step of anodizing the rear surface of said substrate proper to form an anodic oxide film; a semiconductor substrate forming step of removing said anodic

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oxide film by means of etching to form said penetration electrodes and said thinned semiconductor substrate; and a removal step of removing said insulation films which cover one end portions of said penetration electrodes”.

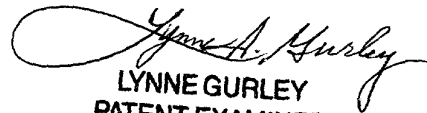
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynne A. Gurley whose telephone number is 703-305-3474. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, John Niebling can be reached on 703-308-3325. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-308-0956.

LAG
December 4, 2003


LYNNE GURLEY
PATENT EXAMINER
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